



^A
UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,188	11/03/2000	Andi Vonlanthen	33109	7256

116 7590 08/05/2003

PEARNE & GORDON LLP
526 SUPERIOR AVENUE EAST
SUITE 1200
CLEVELAND, OH 44114-1484

EXAMINER

ENSEY, BRIAN

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

22

Office Action Summary

Application No.

09/706,188

Applicant(s)

VONLANTHEN, ANDI

Examiner

Brian Ensey

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-6 and 9-12 have been considered but are moot in view of the new ground(s) of rejection.

Examiner acknowledges the cancellation of claims 7 and 8.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Charpentier et al., U.S. Patent No. 5,321,758.

Regarding claim 12, Charpentier discloses an electromagnetic transducer (76) for a hearing device fitted with at least two impedance elements (RA-RD), characterized in that a switch is present at the transducer (74A-74D) and comprises a control input setting the particular operational input impedance by configuring the impedance elements in different ways (See col. 3, line 58 to col. 4, line 18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2643

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Charpentier et al., U.S Patent No. 5,321,758.

Regarding claim 1, Charpentier discloses a method to control the dynamic range of a hearing device, comprising at least one acoustic/electric input transducer (10) followed by a signal processing unit (100) which in turn is operationally connected to a receiver, characterized in that the input impedance of the receiver is selectively switched from one value to another (See Fig. 1-1 and 1-2 and col. 1, line 58 to col. 4, line 18). Charpentier does not expressly disclose that the receiver is an electromechanical device. However, the use of electric/mechanical output transducers such as bone conduction and piezoelectric are well-known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an electric/mechanical output transducer for user's to benefit from both acoustic and non-acoustic outputs.

Regarding claim 2, Charpentier discloses a method as claimed. Charpentier does not expressly disclose the selective switching is carried out when matching the hearing device to an individual. However, Charpentier does teach selective switching is controlled by an EEPROM which is connected to an external programming unit through a digital interface (See col. 2, line 58 to col. 3, line 18). It would have been obvious to one of ordinary skill in the art at the time of the invention that the switching can be controlled during the fitting of the hearing aid through the external programming unit to more closely match the hearing devices parameters with the needs of the user.

Regarding claims 3 and 4, Charpentier further discloses the selective switching is controlled by the signal processing unit (100) and the switching is carried out automatically or is initiated from outside the hearing device (See Figs. 1-1 and 1-2 and col. 2, line 55 to col. 4, line 18).

Regarding claim 5, Charpentier further discloses the input impedance is switched by selectively switching between series and/or parallel circuits of impedance elements (See Fig. 1-2).

Regarding claim 6, Charpentier discloses a method for manufacturing hearing-aid models with different transfer functions between input-side acoustic/electric transducers and at least one output-side receiver characterized in that the hearing models are manufactured having a same design and in that their impedance-specific dynamic range is set by selectively switching ON an input impedance of the receiver (See Fig. 1-1 and 1-2 and col. 1, line 58 to col. 4, line 18). Charpentier does not expressly disclose that the receiver is an electromechanical device. However, the use of electric/mechanical output transducers such as bone conduction and piezoelectric are well-known in the art as discussed in claim 1.

Regarding claim 9, Charpentier discloses a hearing device fitted with at least one acoustic/electric input transducer (10) of which an output is operationally connected to an input to a signal processing unit (100) of which an output is operationally connected to an input of at least one receiver, characterized in that the input impedance of the receiver can be switched at a control input wherein the control input is operationally connected with a manually driven control unit (90) (See Fig. 1-1 and 1-2 and col. 1, line 58 to col. 4, line 18). Charpentier does not expressly disclose that the receiver is an electromechanical device. However, the use of

Art Unit: 2643

electric/mechanical output transducers such as bone conduction and piezoelectric are well-known in the art as discussed in claim 1.

Regarding claim 10, Charpentier discloses a hearing device fitted with at least one acoustic/electric input transducer (10) of which an output is operationally connected to an input to a signal processing unit (100) of which an output is operationally connected to an input of at least one output receiver, characterized in that the input impedance of the output receiver can be switched at a control input, and further comprising a switch connecting at least two impedance elements selectively in series or parallel to the control input (See Fig. 1-1 and 1-2 and col. 1, line 58 to col. 4, line 18). Charpentier does not expressly disclose that the receiver is an electromechanical device. However, the use of electric/mechanical output transducers such as bone conduction and piezoelectric are well-known in the art as discussed in claim 1.

Regarding claim 11, Charpentier does not expressly disclose the input impedance elements are at least in part coils. However, it is well-known in the field of electronics that impedance components generally consist of resistors, inductors (coils) and capacitors. It would have been obvious to one of ordinary skill in the art at the time of the invention to use coils, at least in part, as input impedance elements for a versatile and easy method to vary impedance.

Regarding claim 13, Charpentier discloses a hearing device fitted with at least one acoustic/electric input transducer (10) of which an output is operationally connected to an input to a signal processing unit (100) of which an output is operationally connected to an input of at least one receiver, characterized in that the input impedance of the receiver can be switched at a control input wherein the control input is operationally connected to an output of the signal processing unit, wherein the control input is operationally connected with a manually driven control unit (See Fig. 1-1 and 1-2 and col. 1, line 58 to col. 4, line 18). Charpentier does not

Art Unit: 2643

expressly disclose that the receiver is an electromechanical device. However, the use of electric/mechanical output transducers such as bone conduction and piezoelectric are well-known in the art as discussed in claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 703-305-7363. The examiner can normally be reached on Mon-Fri: 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

BKE
July 28, 2003


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600